

REMARKS

Claims 34-63 are pending in the present application. Claims 34-63 have been rejected. The specification and FIG. 5D have been amended. Claims 36-38 have been cancelled. Claims 34 and 39 have been amended. New Claims 64-78 have been added. No new matter has been introduced by these amendments or new claims. Reconsideration and allowance is respectfully requested in view of the amendments and the following remarks.

Claims 34-37 have been rejected under 35 U.S.C. § 103(a), as being unpatentable over Aroyan et al. (U.S. Patent No. 6,163,313). Applicants respectfully disagree with the Examiner's contentions.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

Aroyan et al. discloses a position touch sensor having a substrate and a resistive layer disposed on the substrate. At least one pair of electrodes is positioned on the resistive layer. A portion of one electrode is spaced from a portion of another electrode to produce an overlapped resistive region between the spaced portions of the electrodes. An insulating region extends into and terminates in the overlapped resistive region from a resistive region of the resistive layer outside the overlapped resistive region. (Abstract) Aroyan et al. does not disclose the presence of a "a plurality of substantially transparent sensors forming a sensory

array", as claimed in amended Claim 34. Therefore, Aroyan et al. does not teach all elements of the present application.

The Examiner has failed to make a *prima facie* case of obviousness. Therefore, Claim 34 is non-obvious. If an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Therefore, Claims 35, and 39-45, depending from non-obvious independent Claim 34, are then also non-obvious. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 46-54 and 56-59 have been rejected under 35 U.S.C. § 103(a), as being unpatentable over Aroyan et al. (U.S. Patent No. 6,163,313), in view of Muroi (U.S. Patent No. 5,021,640). Applicants respectfully disagree with the Examiner's contentions.

As stated above, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a *prima facie* case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

As stated above, Aroyan et al. discloses a position touch sensor having a substrate and a resistive layer disposed on the substrate. At least one pair of electrodes is positioned on the resistive layer. A portion of one electrode is spaced from a portion of another electrode to produce an overlapped resistive region between the spaced portions of the electrodes. An insulating region extends into

and terminates in the overlapped resistive region from a resistive region of the resistive layer outside the overlapped resistive region. (Abstract) Aroyan et al. teaches that when the touch screen 105 is pressed, the conductive coating 220 of the cover sheet 210 making direct electrical contact with the resistive layer 205 on the substrate 200. When functioning as a current injections source, the cover sheet 210 is connected to a current source...which injects current into the resistive layer 205 of the substrate 200 when the touchscreen 105 is activated. The electrodes at the corners...of the substrate 200 are connected to the controller electronics 110 where current flows to virtual grounds are detected. The controller electronics 110 observes the division of currents between the four corners of the substrate 200, and the sum of the currents at the four corners provides a touch detect signal, measured electronically in X and Y coordinates. (Col. 12, lines 17-46) Aroyan et al. does not teach “a plurality of substantially transparent conductive traces in the X axis and a plurality of substantially transparent conductive traces in the Y axis for sensing capacitive coupling between a user’s touch and the sensor array along two axes...”, as claimed in Claim 46.

Muroi discloses a bar code reading device including a code reading section for reading a bar code attached to an article by emitting a light beam through a window and receiving therethrough the light beam reflected from the bar code, and a manual input section for imputing article information by operation of a keyboard. (Abstract) However, Muroi does not remedy the deficiencies of Aroyan et al. Muroi does not teach “a plurality of substantially transparent conductive traces in the X axis and a plurality of substantially transparent conductive traces in the Y axis for sensing capacitive coupling between a user’s touch and the sensor array

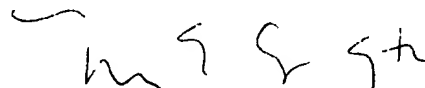
along two axes...”, as claimed in Claim 46. Therefore, the combination of Aroyan et al. and Muroi does not teach each and every element of the present invention.

The Examiner has failed to make a *prima facie* case of obviousness. Therefore, Claim 46 is non-obvious. If an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Therefore, Claims 47-63, depending from non-obvious independent Claim 46, are then also non-obvious. Reconsideration and withdrawal of this rejection is respectfully requested.

The prior art cited (U.S. Patent No. 6,297,811 B1 to Kent et al.) and not relied upon is believed to comprise general information that does not render the present application anticipated or obvious.

In view of the foregoing, consideration and an early allowance of this application are earnestly solicited.

Respectfully submitted,
SIERRA PATENT GROUP, LTD.



Nicole E. Coppes-Gathy
Reg. No: 46,640

Dated: June 27, 2002

Sierra Patent Group, Ltd.
PO Box 6149
Stateline, NV 89449
(775) 586-9500

VERSION WITH MARKED-UP CHANGES:

In the Specification:

Page 8, lines 3-9:

Layer 60 shows the location of [an opaque] a substrate that would be viewable through transparent layers 52-58. Examples of such a substrate include, but are not limited to, an opaque substrate, or a graphical display device such as, but not limited to a Liquid Crystal Display (LCD) or Cathode Ray Tube (CRT), artwork, or additional electronics such a fingerprint recognizer. In some embodiments, layer 60 may be omitted altogether. Alternatively, substrate 58 can be omitted and transparent conductor 56 can be patterned directly on layer 60.

Page 12, line 22 to Page 13, line 5:

A number of additional alternative embodiments of the invention are possible. For example, electrical shielding may be required to isolate sensor traces from electrical noise that arises from electrical circuits that are present below the sensor. One preferred, but not limiting embodiment is shown in Figure 6 on two-dimensional sensor 36. Layers 62-68 are the same art as described in Figure 5D. Beneath transparent substrate 68, another layer of transparent insulator 74 attaches another layer of transparent conductor 78 and substrate 80. Unlike transparent conductor layers 64 and 70, transparent conductor 78 is a uniform layer of conductor that is connected to an electrical ground. Grounding transparent conductor 78 provides sensor 36 with electrical shielding from electrical noise sources that might radiate from [the opaque] layer 60 or below. Examples of

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materials suitable for transparent conductor 78 and substrate 80 have already been described in Figure 2.

In the Claims:

Please amend the claims as follows:

34. A transparent capacitive touch sensing system compris[ed]ing [of]:

a plurality of substantially transparent sensors forming a sensory array disposed on a single substrate covering a portion of said substrate;

wherein each said substantially transparent sensor[A substantially transparent sensor which can] capacitively senses a user's fingers or conductive stylus when either are touching or in very close proximity to each said substantially transparent sensor[,]; and

a sensing device for detecting capacitance changes on each said substantially transparent sensor.

39. The system of claim [38]34, in which said plurality of substantially transparent sensors form a transparent capacitive touch sensing system compris[ed]ing [of]:

a substantially transparent one-dimensional sensor comprising a plurality of transparent conductive traces in one axis for sensing capacitive coupling between a user's touch and the sensor array along one axis; and

a sensing device for detecting capacitance changes on the transparent sensor trace array.